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                 Web Page URLs for STN Seminar Schedule - N. America
NEWS
                 "Ask CAS" for self-help around the clock
NEWS
         May 12
                 EXTEND option available in structure searching
NEWS
                 Polymer links for the POLYLINK command completed in REGISTRY
         May 12
         May 27
NEWS
                 New UPM (Update Code Maximum) field for more efficient patent
                 SDIs in Caplus
         May 27
NEWS
                 CAplus super roles and document types searchable in REGISTRY
         Jun 28
NEWS
                 Additional enzyme-catalyzed reactions added to CASREACT
NEWS
         Jun 28
                 ANTE, AQUALINE, BIOENG, CIVILENG, ENVIROENG, MECHENG,
                 and WATER from CSA now available on STN(R)
                 BEILSTEIN enhanced with new display and select options,
NEWS
         Jul 12
                 resulting in a closer connection to BABS
NEWS 10
         Jul 30
                 BEILSTEIN on STN workshop to be held August 24 in conjunction
                 with the 228th ACS National Meeting
NEWS 11
         AUG 02
                 IFIPAT/IFIUDB/IFICDB reloaded with new search and display
                 fields
NEWS 12
         AUG 02
                 CAplus and CA patent records enhanced with European and Japan
                 Patent Office Classifications
                 STN User Update to be held August 22 in conjunction with the
NEWS 13
         AUG 02
                 228th ACS National Meeting
NEWS 14
         AUG 02
                The Analysis Edition of STN Express with Discover!
                 (Version 7.01 for Windows) now available
        AUG 04
NEWS 15
                 Pricing for the Save Answers for SciFinder Wizard within
                 STN Express with Discover! will change September 1, 2004
```

NEWS EXPRESS

JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
NEWS HOURS
STN Operating Hours Plus Help Desk Availability
NEWS INTER
General Internet Information
NEWS LOGIN
NEWS COGIN
NEWS PHONE
Direct Dial and Telecommunication Network Access to STN
NEWS WWW
CAS World Wide Web Site (general information)

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=> file reg COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

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STRUCTURE FILE UPDATES: 23 AUG 2004 HIGHEST RN 731771-88-3 DICTIONARY FILE UPDATES: 23 AUG 2004 HIGHEST RN 731771-88-3

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html

Uploading c:\program files\stnexp\queries\10771861.6

L1 STRUCTURE UPLOADED

=> d l1 L1 HAS NO ANSWERS L1 STR

=>

G2 SO2 G3

G1 Cb,Cy,Hy

G2 N, NH, NH2, Ak

G3 Cy, Hy

Structure attributes must be viewed using STN Express query preparation.

=> s ll sss full

Patel

FULL SEARCH INITIATED 14:54:41 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 855006 TO ITERATE

46.8% PROCESSED 400000 ITERATIONS INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED) SEARCH TIME: 00.00.12

63 ANSWERS

FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**

BATCH **INCOMPLETE**

PROJECTED ITERATIONS: 855006 TO 855006 PROJECTED ANSWERS: 100 TO

1.2 63 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 155.42 155.63

FILE 'CAPLUS' ENTERED AT 14:54:59 ON 24 AUG 2004 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE COVERS 1907 - 24 Aug 2004 VOL 141 ISS 9 FILE LAST UPDATED: 23 Aug 2004 (20040823/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 12

L3 19 L2

=> d l3 fbib hitstr abs total

- L3 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2004:303289 CAPLUS
- DN 141:54156
- 2,3-Diarylpyran-4-ones: a new series of selective cyclooxygenase-2 TT inhibitors
- ΑIJ Joo, Yung Hyup; Kim, Jin Kwan; Kang, Seon-Hwa; Noh, Min-Soo; Ha, Jun-Yong; Choi, Jin Kyu; Lim, Kyung Min; Chung, Shin
- CS Pharmaceutical & Health Research Institute, Drug Discovery, AmorePacific Corporation R&D Center, Kyounggi-do, 449-729, S. Korea
- so Bioorganic & Medicinal Chemistry Letters (2004), 14(9), 2195-2198 CODEN: BMCLE8; ISSN: 0960-894X
- PΒ Elsevier Science B.V.

DT Journal

LA English

IT 708244-51-3P 708244-72-8P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL

(Biological study); PREP (Preparation)

(preparation of 2,3-diarylpyran-4-ones as cyclooxygenase-2 inhibitors and

oral antiinflammatory agents)

RN 708244-51-3 CAPLUS

CN 4H-Pyran-4-one, 3-[1,1'-biphenyl]-4-yl-5-chloro-2-[4-

(methylsulfonyl)phenyl] - (9CI) (CA INDEX NAME)

RN 708244-72-8 CAPLUS

CN 4H-Pyran-4-one, 5-chloro-3-(2-fluoro[1,1'-biphenyl]-4-yl)-2-[4-(methylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)

AB A new series of cyclooxygenase-2 (COX-2) inhibitors with γ -pyrone as central scaffold unit has been synthesized and their biol. activities were evaluated against cyclooxygenase inhibitory activity. The changes of phys. properties of the mols. were performed according to the medicinal chemical principles and moderate oral antiinflammatory activity was obtained with this series of inhibitors.

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

```
2004:182828 CAPLUS
AN
DN
     140:217657
     Preparation of N-(4-heterocyclylphenyl)phthalic acid diamide compounds as
ΤI
     pest control agents
     Mita, Takeshi; Kudo, Yoshihiro; Mizukoshi, Takashi; Hotta, Hiroyasu;
IN
     Maeda, Kazushige; Takii, Shinji
     Nissan Chemical Industries, Ltd., Japan
PA
     PCT Int. Appl., 634 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LA
     Japanese
FAN.CNT 1
     PATENT NO.
                           KIND
                                  DATE
                                               APPLICATION NO.
                                                                         DATE
                                                -----
                           ----
                                               WO 2003-JP10708
                                  20040304
                                                                         20030825
PΙ
     WO 2004018410
                            A1
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
              CO, CR, CU, CZ, DE, DK, DM, DZ, BC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH,
              PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,
              TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ,
              MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
              CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
              NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
              GW, ML, MR, NE, SN, TD, TG
                                                JP 2002-244619
                                                                      Α
                                                                         20020826
                                                JP 2002-281294
                                                                      Α
                                                                         20020926
                                                JP 2002-344987
                                                                      Α
                                                                         20021128
                                                JP 2003-83371
                                                                      Α
                                                                         20030325
                                                JP 2003-182013
                                                                      Α
                                                                         20030626
os
     MARPAT 140:217657
IT
     666746-24-3P
     RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN
     (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES
     (Uses)
         (preparation of N-(4-heterocyclylphenyl)phthalic acid diamide compds. as
        pest control agents such as insecticides and acaricides)
RN
     666746-24-3 CAPLUS
CN
     1H-Isoindole-1,3(2H)-dione, 2-[4-[4,5-dihydro-3-[4-(methylsulfonyl)phenyl]-
     5-(trifluoromethyl)-5-isoxazolyl]-2-methylphenyl]-4-nitro- (9CI) (CA
     INDEX NAME)
```

GI

$$(Y)_{n} \xrightarrow{R^{4}} G$$

$$(X)_{m} \xrightarrow{(R^{6})_{p}} G$$

$$(X)_{m} \xrightarrow{(R^{6})_{p}} G$$

$$(R^{6})_{p}$$

$$(R^{6})_{p}$$

$$(R^{6})_{p}$$

AB 4'-Heterocyclylbenzanilides [I; G = 5- or 6-membered nonarom. heterocyclyl containing at least one atom selected from O, S, and N and at least one double bond, 5- or 6-membered saturated heterocyclyl containing 2 atoms selected from O,

I.

S, and N, 3- to 6-membered cycloalkyl; W1, W2 = 0, S; X = halo, cyano, NO2, N3, -SCN, SF5, each (un) substituted C1-6 alkyl, C3-8 cycloalkyl, C2-6 alkenyl, C2-6 alkynyl, or OH, C3-8 cycloalkenyl, C3-8 halocycloalkenyl, SH, etc.; Y = halo, cyano, NO2, N3, -SCN, SF5, each (un) substituted C1-6 alkyl, C3-8 cycloalkyl, Ph, OH, or NH2, SH, etc.; R1, R2, R3 = H, cyano, each (un) substituted C1-12 alkyl, C3-12 cycloalkyl, C3-12 alkenyl, C3-12 alkynyl, PhO, phenyl-C1-4 alkoxy, PhS, or Ph, C3-12 cycloalkenyl, C3-12 halocycloalkenyl, C1-6 alkylthio, C1-6 haloalkylthio, etc.; R4 = H, halo, cyano, each (un) substituted C1-6 alkyl, C1-6 haloalkyl, C3-8 cycloalkyl, Ph, or OH, C3-6 alkenyl, C3-6 haloalkenyl, C3-6 alkynyl, C3-6 haloalkyl, 1-naphthyl, 2-naphthyl, etc.; R5 = H, halo, cyano, each (un) substituted C1-6 alkyl, C1-6 haloalkyl, C3-8 cycloalkyl, C3-8 halocycloalkyl, or OH, C3-6 alkenyl, C3-6 haloalkenyl, C3-6 alkynyl, C3-6 haloalkynyl, etc.; R6 = H, halo, cyano, each (un) substituted C1-6 alkyl, C1-6 haloalkyl, C3-8 cycloalkyl, C3-8 halocycloalkyl, or Ph, C1-6 alkoxy, C1-6 haloalkoxy, 1-naphthyl, 2-naphthyl, etc.; m, n = an integer of 0-4; p = an integer of 0-9] or salts thereof. Also disclosed is a novel agricultural chemical, especially

an insecticide or acaricide containing the compound I as the active ingredient. For example, N1-[4-[3-(4-fluorophenyl)-5-trifluoromethyl-4,5-dihydroisoxazol-5-yl]-2-methylphenyl]-3-nitro-N2-isopropylphthaldiamide and N1-[4-[6-(4-chlorophenyl)-2-methyl-4-trifluoromethyl-3,4-dihydropyrimidin-4-yl]-2-methylphenyl]-3-iodo-N2-isopropylphthaldiamide at 100 ppm controlled ≥80% 2nd instar larvae of Spodoptera litura on cabbage leaves.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L3 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2003:836766 CAPLUS
- DN 139:350731
- TI Preparation of 1-phenyl-1H-pyrazoles for inducing apoptosis in proliferating cells
- IN Chen, Ching-shin; Song, Xueqin; Lin, Ho-pi
- PA The Ohio State University Research Foundation, USA

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10771861.6Page 7
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PCT Int. Appl., 83 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
                          KIND
                                  DATE
                                               APPLICATION NO.
                                                                       DATE
     PATENT NO.
                                  20031023
                                               WO 2003-US10738
                                                                       20030408
     WO 2003086287
                           A2
PI
     WO 2003086287
                           A3
                                  20040325
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
              CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
              GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
              LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
              PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ,
              MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
              CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
              NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
              GW, ML, MR, NE, SN, TD, TG
                                               US 2002-370664P
                                                                       20020408
     US 2003236294
                           A1
                                  20031225
                                               US 2003-409502
                                                                       20030408
                                               US 2002-370664P
                                                                      20020408
     MARPAT 139:350731
os
IT
     618068-95-4P 618068-99-8P 618069-00-4P
     618069-08-2P 618069-09-3P 618069-10-6P
     618069-11-7P 618069-12-8P 618069-13-9P
     618069-14-0P 618069-15-1P
     RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
         (antiproliferative agent; preparation of 1-Ph-1H-pyrazoles for inducing
        apoptosis in proliferating cells)
RN
     618068-95-4 CAPLUS
     Benzenesulfonamide, 4-[3-(trifluoromethyl)-5-[4'-(trifluoromethyl)[1,1'-
CN
     biphenyl]-4-yl]-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)
```

RN 618068-99-8 CAPLUS CN Benzenesulfonamide, 4-[5-[1,1'-biphenyl]-4-yl-3-(trifluoromethyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

RN 618069-00-4 CAPLUS

CN

Benzenesulfonamide, 4-[5-(3',5'-dichloro[1,1'-biphenyl]-4-yl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

RN 618069-08-2 CAPLUS

CN Benzenesulfonamide, 4-[5-(4'-butyl[1,1'-biphenyl]-4-yl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

RN 618069-09-3 CAPLUS

CN Benzenesulfonamide, 4-[5-(4'-methyl[1,1'-biphenyl]-4-yl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

RN 618069-10-6 CAPLUS
CN Benzenesulfonamide, 4-[5-(4'-azido[1,1'-biphen

Benzenesulfonamide, 4-[5-(4'-azido[1,1'-biphenyl]-4-yl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

RN 618069-11-7 CAPLUS

CN Benzenesulfonamide, 4-[5-[4'-(azidomethyl) [1,1'-biphenyl]-4-yl]-3-(trifluoromethyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

RN 618069-12-8 CAPLUS

CN Benzenesulfonamide, 4-[5-(4'-chloro[1,1'-biphenyl]-4-yl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

RN 618069-13-9 CAPLUS

CN Benzenesulfonamide, 4-[5-(2',3'-dichloro[1,1'-biphenyl]-4-yl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

RN 618069-14-0 CAPLUS

CN Benzenesulfonamide, 4-[5-(3',5'-dimethyl[1,1'-biphenyl]-4-yl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

RN 618069-15-1 CAPLUS

CN Benzenesulfonamide, 4-[5-(2',4',5'-trichloro[1,1'-biphenyl]-4-yl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

GI

$$R^2$$
 $N-N$
 R^1
 I
 SO_2-NH_2
 II

AB Title compds. I (wherein R1 = carboxamido; R2 = (halo)alkyl; Ar = (un) substituted Ph biphenyl, naphthyl, anthryl, phenanthrenyl, or fluorenyl; and pharmaceutically acceptable salts thereof] were prepared and tested for their effects on cyclooxygenase-2 (COX-2) activity, the viability of human prostate cancer PC-3 cells, and their ability to induce apoptosis in these cells. For example, Claisen condensation of 2-acetylphenanthrene with Et trifluoroacetate in the presence of NaH afforded the 1,3-keto-enol derivative (95%). Reaction with (4-sulfamoylphenyl)hydrazine-HCl in EtOH gave 4-[5-(2-phenanthrenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide (II) in 65% yield. A structure-activity anal. of derivs. of the COX-2 inhibitor celecoxib found no correlation between the COX-2 inhibitory and apoptosis-inducing activities. For instance, increased polarity or bulkiness of the terminal Ph ring reduced the ability of compds. to inhibit COX-2, while a certain degree of bulkiness and hydrophobicity in the substituted Ph ring was highly desirable for apoptosis induction in PC-3 cells. Thus, I are useful for inducing apoptosis in proliferating cells, particularly cancer cells, including but not limited to prostate cancer, leukemia, non-small cell lung cancer, colon cancer, CNS cancer, melanoma, ovarian cancer, renal cancer, bladder cancer, lymphoma, and breast cancer. These compds. are particularly useful in the treatment of androgen-independent cancers, including hormone-refractory prostate cancer.

```
L3
      ANSWER 4 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
AN
      2003:777577 CAPLUS
DN
      139:286336
TI
      Medicinal composition containing inhibitor of decomposition of
      extracellular matrix of cartilage
IN
      Gemba, Takefumi; Okamoto, Hiroyuki; Watanabe, Fumihiko
PA
      Shionogi & Co., Ltd., Japan
so
      PCT Int. Appl., 101 pp.
      CODEN: PIXXD2
DT
      Patent
LA
      Japanese
FAN. CNT 1
      PATENT NO.
                              KIND
                                       DATE
                                                     APPLICATION NO.
                                                                                  DATE
                                       -----
                              _ _ _ _
                                                     ------
PΙ
      WO 2003080042
                                                     WO 2003-JP3673
                               A1
                                       20031002
                                                                                  20030326
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
               CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH,
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PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD,

RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

JP 2002-87330 A 20020327

OS MARPAT 139:286336

IT 607719-52-8P 607719-58-4P 607719-60-8P 607719-61-9P 607719-62-0P 607719-63-1P 607719-64-2P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

 $\begin{tabular}{ll} \mbox{(medicinal composition containing inhibitor of decomposition of extracellular matrix \end{tabular}$

of cartilage and preparation of said inhibitor)

RN 607719-52-8 CAPLUS

CN L-Tryptophan, N-[[4-[5-[4-(1-pyrrolidinyl)phenyl]-2-thienyl]phenyl]sulfonyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 607719-58-4 CAPLUS

RN 607719-60-8 CAPLUS
CN D-Phenylalanine, N-[[4-[5-[4-(1H-pyrrol-1-yl)phenyl]-2-thienyl]phenyl]sulfonyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 607719-61-9 CAPLUS
CN D-Alanine, N-[[4-[5-[4-(1H-pyrrol-1-yl)phenyl]-2-thienyl]phenyl]sulfonyl](9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 607719-62-0 CAPLUS
CN D-Leucine, N-[[4-[5-[4-(1-piperidinyl)phenyl]-2-thienyl]phenyl]sulfonyl](9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 607719-63-1 CAPLUS

CN Benzeneacetic acid, 4-hydroxy-α-[[[4-[5-[4-(1-pyrrolidinyl)phenyl]-2-thienyl]phenyl]sulfonyl]amino]-, (αR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Absolute stereochemistry.

AB A medicinal composition contains a compound represented by the general formula R6R5R4SO2W [W is R3NCH(R2)COR1, etc.; R1 is hydroxy, etc.; R2 is optionally substituted lower alkyl, etc.; R3 is hydrogen, etc.; R4 is optionally substituted arylene, etc.; R5 is a single bond, CO, etc.; and R6 is optionally substituted aryl, etc.], an optically active isomer thereof, a prodrug thereof, a pharmaceutically acceptable salt of any of these, or a solvate of any of these. Compds. of this invention in vitro

showed IC50 values of 0.00045 \(\mu \) to >10 \(\mu \) against MMP-13. Formulations are given. THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 62 ALL CITATIONS AVAILABLE IN THE RE FORMAT ANSWER 5 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN 1.3 AN 2003:221693 CAPLUS 138:238197 DN Preparation of furo- and thienopyrimidines as TIE-2 and/or VEGFR-2 kinase inhibitors useful against hyperproliferative diseases Adams, Jerry Leroy; Bryan, Deborah Lynne; Feng, Yanhong; Matsunaga, IN Shinichiro; Maeda, Yutaka; Miyazaki, Yasushi; Nakano, Masato; Rocher, Jean-Philippe; Sato, Hideyuki; Semones, Marcus; Silva, Domingos J.; Tang, Glaxosmithkline K.K., Japan; Smithkline Beecham Corporation PA PCT Int. Appl., 265 pp. CODEN: PIXXD2 DT Patent T.A English FAN.CNT 1 APPLICATION NO. PATENT NO. KIND DATE DATE ______ ---------ΡI WO 2003022852 A2 20030320 WO 2002-US28650 20020910 WO 2003022852 **A3** 20031127 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG US 2001-318766P P 20010911 EP 1425284 **A2** 20040609 EP 2002-798181 20020910 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, SK US 2001-318766P 20010911 WO 2002-US28650 W 20020910 MARPAT 138:238197

os

501695-52-9P, 4-Amino-5-(4-biphenylyl)-6-(4-IT sulfamoylphenyl) furo [2, 3-d] pyrimidine RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU

(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of furo- and thienopyrimidines as TIE-2 and/or VEGFR-2 kinase inhibitors useful against hyperproliferative diseases)

RN 501695-52-9 CAPLUS

Benzenesulfonamide, 4-(4-amino-5-[1,1'-biphenyl]-4-ylfuro[2,3-d]pyrimidin-CN 6-yl) - (9CI) (CA INDEX NAME)

GΙ

$$\begin{array}{c|c}
R^2 & A \\
N & X
\end{array}$$

Furo- and thienopyrimidine derivs. (shown as I; variables defined below; AB e.g. 4-Amino-3-(4-methoxyphenyl)-2-[3-(methylsulfonylamino)phenyl]furo[2,3d]pyrimidine), which are useful as TIE-2 (tyrosine kinase containing immunoglobin and EGF homol. domains) and/or VEGFR-2 kinase inhibitors against hyperproliferative diseases are described herein. Enzyme inhibitions by .apprx.60 examples of I are included as ranges; also, 4-amino-3-[4-[[2-fluoro-5-(trifluoromethyl)phenyl]aminocarbonylamino]pheny 1]thieno[2,3-d]pyrimidine exhibited IC50 = 0.0018 µM in the TIE-2 fluorescence polarization kinase activity assay. For I: X is O or S; A is H, halo, C1-C6 alkyl, aryl, heteroaryl, aryl or heteroaryl substituted with ≥ 1 R3, heterocyclyl, -RR3, -C(0)OR4, -C(0)NR5R6, -C(0)R4; D is H, halo, C1-C6 alkyl, aryl, heteroaryl, aryl or heteroaryl substituted with ≥ 1 R3, heterocyclyl, -RR3, -C(0)OR4, -C(0)NR5R6, or -C(0)R4. R is C1-C6 alkylene, C3-C7 cycloalkylene, C1-C6 alkenylene, or C1-C6 alkynylene; R1 is H, C1-C6 alkyl, C1-C6 alkoxy, -SR4, -S(O)2R4, -NR7R7, -NR'N R'''R''', -N(H)RR3, -C(O)OR7, or -C(O)NR7R7. R2 is H, -OH, -NR7R7 or :NH; R3 is halo, C1-C6 alkyl, C1-C6 haloalkyl, C1-C6 alkoxy, C3-C7 cycloalkoxy, C1-C6 haloalkoxy, aryl, aralkyl, aryloxy, heteroaryl, heterocyclyl, -CN, -NHC(O)R4, -N(R8)HC(O)R4, -NHC(S)R4, -NR5R6, -RNR5R6, -SR4, -S(0) 2R4, -RC(0) OR4, -C(0) OR4, -C(0) R4, -C(0) NR5R6, -NHS(0) 2R4, -N(S(O)2R4)S(O)2R4, -S(O)2NR5R6, or -NHC(:NH)R4. R4 is H, C1-C6 alkyl, aryl, heteroaryl, heterocyclyl, -RR3, -NR'''R'''', or - NR'NR'''R''''; R5 is H, C1-C6 alkyl, C3-C7 cycloalkyl, cyanoalkyl, -R'R'', aryl, aralkyl, heteroaryl, -NHC(0)OR''', -R'NHC(0)OR''', -R'NHC(0)NR'''R'''', or -R'C(0)OR'''. R6 is H, C1-C6 alkyl, C3-C7 cycloalkyl, cyanoalkyl, -R'R'' aryl, aralkyl, heteroaryl, -C(O)OR''', or -R'C(O)NR'''R'''; R7 is H, C1-C6 alkyl, aryl, or -C(0)OR'''; R8 is C1-C3 alkyl; R' is C1-C3 alkylene; R'' is heteroalkyl or NRR'''R''''; R''' is H, C1-C6 alkyl, aryl, aralkyl, heteroaryl, or C3-C7 cycloalkyl; R'''' is H, C1-C6 alkyl, aryl, heteroaryl, or C3-C7 cycloalkyl. Although the methods of preparation are not claimed, several example prepns. of I are included and characterization data is given for .apprx.480 examples of I.

ANSWER 6 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN 2003:69769 CAPLUS

AN

DN 138:364359

L3

- TI Voltage-dependent formation of anion channels by synthetic rigid-rod push pull $\beta\text{-barrels}$
- AU Sakai, Naomi; Houdebert, David; Matile, Stefan
- CS Department of Organic Chemistry, University of Geneva, Geneva, 1211/4, Switz.
- SO Chemistry--A European Journal (2003), 9(1), 223-232 CODEN: CEUJED; ISSN: 0947-6539
- PB Wiley-VCH Verlag GmbH & Co. KGaA
- DT Journal
- LA English
- IT 406217-64-9

RL: BSU (Biological study, unclassified); BIOL (Biological study) (voltage-dependent formation of anion channels by synthetic rigid-rod push-pull β -barrels)

RN 406217-64-9 CAPLUS

CN L-Leucinamide, 1,1',1'',1''',1''''-[[4-methoxy-4'''''(methylsulfonyl) [1,1':4',1'':4'',1''':4''',1''':4''',1''':4''',1''''
hexayl]hexakis[oxy(1-oxo-2,1-ethanediyl)]]hexakis[L-leucyl-L-lysyl-(9CI)
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

$$H_2N$$
 $i-Bu$
 $i-Bu$
 H_2N
 $i-Bu$

AB Ion channels formed by p-octiphenyls equipped with amphiphilic, cationic tripeptide strands and either with (5) or without (6) axial dipole moment are described (preliminary communication: N. Sakai, S. Matile, J. Am. Chemical Society 2002, 124, 1184-1185). Fluorescence kinetics with variably polarized neutral or anionic vesicles, together with planar bilayer conductance measurements, reveal voltage dependence with weakly lyotropic anion selectivity, and deactivation by competing surface potentials of the ion channels formed by asym. 5. In planar bilayers, 5 forms short-lived, poorly organized channels-similar to those produced by α-helical natural antibiotics-capable of transforming into stable, ohmic p-octiphenyl "β-barrel" ion channels similar to those of the >99% homologous but sym. 6. Fluorescence depth quenching and CD studies confirm the effect of membrane potentials in promotion of the partitioning of 5 (but not 6) into the bilayers, identifying partitioning as the voltage-dependent step.

RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:22325 CAPLUS

DN 139:6667

TI Synthesis and fluorescence enhancement of oligophenylene-substituted calix[4]arene assemblies

AU Wong, Man Shing; Zhang, Xiao Ling; Chen, Dong Zhong; Cheung, Wai Ho

CS Department of Chemistry, Hong Kong Baptist University, Hong Kong, Peop. Rep. China

SO Chemical Communications (Cambridge, United Kingdom) (2003), (1), 138-139 CODEN: CHCOFS; ISSN: 1359-7345

PB Royal Society of Chemistry

DT Journal

LA English

OS CASREACT 139:6667

IT 536708-84-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation of oligophenylene-substituted calixarene assemblies via cross-coupling reaction of oligoboronic acid and tetrahalocalixarenes and their fluorescence enhancement)

RN 536708-84-6 CAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),1 5,17,19(26),21,23-dodecaene, 25,26,27,28-tetrakis(decyloxy)-5,11,17,23-tetrakis[4''-(hexylsulfonyl)[1,1':4',1''-terphenyl]-4-yl]- (9CI) (CA INDEX NAME)

PAGE 1-A

0

PAGE 3-A

AB Tetra-oligophenylene substituted calix[4] arene assemblies containing up to three phenylene units have been synthesized by a convergent approach using Suzuki cross-coupling reaction. Their optical properties were investigated and compared with the corresponding monomer.

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L3 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2002:805629 CAPLUS
- DN 138:200393
- On the importance of intermediate internal charge repulsion for the synthesis of multifunctional pores
- AU Baumeister, Bodo; Som, Abhigyan; Das, Gopal; Sakai, Naomi; Vilbois, Francis; Gerard, David; Shahi, Shatrughan P.; Matile, Stefan
- CS Department of Organic Chemistry, University of Geneva, Geneva, CH-1211/4, Switz.
- SO Helvetica Chimica Acta (2002), 85(9), 2740-2753 CODEN: HCACAV; ISSN: 0018-019X
- PB Verlag Helvetica Chimica Acta
- DT Journal
- LA English
- OS CASREACT 138:200393
- IT 406217-64-9

RL: BSU (Biological study, unclassified); BIOL (Biological study) (importance of intermediate internal charge repulsion for synthesis of

multifunctional pores)

RN 406217-64-9 CAPLUS

CN L-Leucinamide, 1,1',1'',1''',1'''',1''''-[[4-methoxy-4''''''(methylsulfonyl)[1,1':4',1'':4'',1''':4''',1'''':4''',1'''':4''',1'''''':4''''',1'''''-octiphenyl]-2',2''',2'''',3'',3'''',3''''hexayl]hexakis[oxy(1-oxo-2,1-ethanediyl)]]hexakis[L-leucyl-L-lysyl- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

$$H_2N$$
 $i-Bu$
 S
 H_2N
 $i-Bu$
 $i-Bu$
 $i-Bu$
 $i-Bu$
 $i-Bu$
 $i-Bu$
 $i-Bu$
 $i-Bu$

AΒ Intermediate internal charge repulsion (ICR) is required to create synthetic pores with large, stable, transmembrane, and variably functionalized space. This conclusion is drawn from maximal transport and, in one case, catalytic activity of p-octiphenyl β-barrel pores with internal lysine, aspartate, and histidine residues around pH 7, 6, and 4.5, resp. PKa Simulations corroborate the exptl. correlation of intermediate ICR with activity and suggest that insufficient ICR causes pore "implosion" and excess ICR pore "explosion". Esterolysis expts. support the view that the formation of stable space within multifunctional p-octiphenyl β -barrels requires more ICR in bilayer membranes than in H2O. Multivalency effects are thought to account for p-octiphenyl β -barrel expansion with increasing number of β -sheets, and proximity effects for unchanged pH profiles with increasing β -sheet length. Q-TOF-nano-ESI-MS barrel-denaturation expts. indicate that contributions from internal counterion effects are not negligible. The overall characteristics of p-octiphenyl β -barrel pores with internal lysine, aspartate, and histidine residues, unlike de novo "\alpha-barrels" and similarly to certain biol. channels, underscore the usefulness of rigid-rod mols. to preorganize complex multifunctional supramol. architecture.

RE.CNT 102 THERE ARE 102 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L3 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
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AN 2002:793608 CAPLUS

DN 137:310917

TI Aromatic-substituted thiohydantoins, their preparation, and their use for treating diabetes, dyslipidemia, and obesity

IN Boubia, Benaiessa; Chaput, Evelyne; Ou, Khan; Ratel, Philippe

PA Laboratoires Fournier SA, Fr.

SO PCT Int. Appl., 111 pp.

CODEN: PIXXD2

DT Patent

LA French

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|----------|
| | | | | | |
| ΡI | WO 2002081453 | A1 | 20021017 | WO 2002-FR1167 | 20020404 |

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WO 2002081453
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        KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
        MX, MZ, NO
    RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
        CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
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FR 2823209
                     A1
                           20021011
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EP 1373219
                     A1
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EE 200300485
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JP 2004525175
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US 2004116417
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                                                            W 20020404
MARPAT 137:310917
471937-21-0P, 1-(4-(Morpholin-4-yl)phenyl)-3-(4-
(aminosulfonyl)phenyl)-5-methyl-2-thioxo-4-imidazolidinone
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
   (drug candidate; preparation of aromatic-substituted thiohydantoins for
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treatment of diabetes, dyslipidemia, and obesity)
RN 471937-21-0 CAPLUS
CN Benzenesulfonamide, 4-[4-methyl-3-[4-(4-morpholinyl)phenyl]-5-oxo-2-thioxo-

Benzenesulfonamide, 4-[4-methyl-3-[4-(4-morpholinyl)phenyl]-5-oxo-2-thioxo-1-imidazolidinyl]- (9CI) (CA INDEX NAME)

GΙ

os

IT

AB The invention concerns compds. derived from 2-thiohydantoin, selected among compds. I [R1 = (un)substituted aromatic nucleus [substituents = halo, alkoxy, alkyl, alkylthio, NO2, CF3, OCF3, OCH2O, or (un)substituted (homo) (thio)morpholine, (homo)piperidine, (homo)piperazine, etc.]; R2 = H, alkyl or cycloalkyl [optionally interrupted by O atoms(s)], haloalkyl, alkenyl, alkynyl, hydroxyalkyl, aminoalkyl, cyanoalkyl, (un)substituted aromatic nucleus; R3 = H, alkyl; R4 = H, alkyl, OH; or R3R4 = CH2; provided that at least one of R1 and R2 is an aromatic nucleus bearing at least one (un)substituted (homo) (thio)morpholine, (homo)piperidine, (homo)piperazine, etc.] and their addition salts with acids, in particular their pharmaceutically acceptable salts. The invention also concerns methods for preparing I, pharmaceutical compns. containing them, and their use

pharmacol. active substances, in particular for treating diabetes, diseases mediated by hyperglycemia, hypertriglyceridemia, dyslipidemia, or obesity. A total of 380 invention compds. and approx. 80 intermediates were prepared and characterized. When tested orally in mice at doses below 200 mg/kg, I reduced glucose levels by up to -73%, and reduced serum triglycerides by up to -56%, with favorable changes in lipid parameters (no specific data). For instance,4-(4-morpholinyl)aniline reacted with Et 2-bromopropionate and NaOAc in EtOH to give 69% N-[4-(4-morpholinyl)phenyl]-DL-alanine Et ester. Cyclocondensation of this amino ester with 4-(isothiocyanato)anisole in refluxing toluene in the presence of AcOH gave 82.5% title compound II.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L3 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2002:73773 CAPLUS
- DN 136:275111
- TI Recognition of Polarized Lipid Bilayers by p-Oligophenyl Ion Channels: From Push-Pull Rods to Push-Pull Barrels
- AU Sakai, Naomi; Matile, Stefan
- CS Department of Organic Chemistry, University of Geneva, Geneva, CH-1211, Switz.
- SO Journal of the American Chemical Society (2002), 124(7), 1184-1185 CODEN: JACSAT; ISSN: 0002-7863
- PB American Chemical Society
- DT Journal
- LA English
- IT 406217-67-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of p-oligophenyl push-pull β -barrel synthetic ion channels which recognize phosphatidylcholine bilayer membranes)

t-BuO-C-CH₂-O

t-BuO-C-CH₂-O

t-BuO-C-CH₂-O

cH₂-C-OBu-t

O

CH₂-C-OBu-t

PAGE 1-B

IT 406217-64-9P

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of p-oligophenyl push-pull β -barrel synthetic ion channels which recognize phosphatidylcholine bilayer membranes)

RN 406217-64-9 CAPLUS

Absolute stereochemistry.

PAGE 1-B

PAGE 2-B

Design, synthesis, and evaluation of 14-methoxy-84-methylsulfonyl-22,33,42,53,62,73-hexa(Gla-Leu-Lys-Leu-NH2)-p-octiphenyl (1) and 14,84-bismethoxy-22,33,42,53,62,73-hexa(Gla-Leu-Lys-Leu-NH2)-p-octiphenyl (2) are described (Gla = -OCH2CO-). Nanomolar concns. of push-pull rod 1 are found to suffice to selectively form ion channels in polarized spherical bilayer membranes composed of egg yolk phosphatidylcholine. Exponential dependence of the ion-channel activity on membrane polarization reveals a gating charge of 0.85/channel. Independence of the activity of push-push rod 2 on membrane potential demonstrates that cell membrane recognition originates from the axial dipole in push-pull rod 1. Nonlinear concentration dependence of activity at -180 mV indicates parallel self-assembly of push-pull rod 1 into a tetrameric barrel-stave supramol.

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ANSWER 11 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
L3
AN
     2001:816659 CAPLUS
DN
     135:357924
TT
     Novel heterocyclic compounds, namely imidazole sulfones and analogs, with
     anti-inflammatory activity, their preparation, and their therapeutic use
     as cyclooxygenase 2 inhibitors
IN
     Almansa Rosales, Carmen; Gonzalez Gonzalez, Concepcion; Torres Barreda, M.
     Carmen
     J. Uriach & Cia S.A., Spain
PA
     PCT Int. Appl., 72 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     Spanish
LA
FAN.CNT 1
     PATENT NO.
                         KIND
                                DATE
                                            APPLICATION NO.
                                                                    DATE
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             RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
             VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
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                                            WO 2001-ES152
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os
     MARPAT 135:357924
     372107-26-1P, 4-Chloro-1-(4-methylsulfonylphenyl)-5-[4-(1-
IT
     pyrrolidinyl)phenyl]imidazole 372107-51-2P, 4-(4-
     Methylsulfonylphenyl)-3-[4-(1-pyrrolidinyl)phenyl]-5H-furan-2-one
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT
     (Reactant or reagent); USES (Uses)
        (drug candidate; preparation of imidazole sulfones and analogs as
        cyclooxygenase 2 inhibitors and antiinflammatories)
RN
     372107-26-1 CAPLUS
CN
     1H-Imidazole, 4-chloro-1-[4-(methylsulfonyl)phenyl]-5-[4-(1-
    pyrrolidinyl)phenyl] - (9CI) (CA INDEX NAME)
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RN 372107-51-2 CAPLUS
CN 2(5H)-Furanone, 4-[4-(methylsulfonyl)phenyl]-3-[4-(1-pyrrolidinyl)phenyl](9CI) (CA INDEX NAME)

IT 372107-27-2P, 1-(4-Methylsulfonylphenyl)-5-[4-(1pyrrolidinyl)phenyl]imidazole 372107-28-3P, 4-Chloro-5-[4-(3hydroxypyrrolidin-1-yl)phenyl]-1-(4-methylsulfonylphenyl)imidazole 372107-29-4P, 4-Chloro-5-[4-(2-methylpyrrolidin-1-yl)phenyl]-1-(4methylsulfonylphenyl)imidazole 372107-31-8P, 4-[4-Chloro-5-[4-(1-pyrrolidinyl)phenyl]imidazol-1-yl]benzenesulfonamide 372107-33-0P, 4-Chloro-5-[3-chloro-4-(1-pyrrolidinyl)phenyl]-1-(4methylsulfonylphenyl)imidazole 372107-35-2P, 4-Chloro-1-(4-methylsulfonylphenyl)-5-[4-(2,5-dioxopyrrolidin-1yl)phenyl]imidazole 372107-37-4P, 4-Chloro-1-(4methylsulfonylphenyl)-5-[4-(2-oxo-3-pyrrolin-1-yl)phenyl]imidazole 372107-39-6P, 4-Chloro-1-(4-methylsulfonylphenyl)-5-[4-(2oxooxazolidin-3-yl)phenyl]imidazole 372107-43-2P, 4-Chloro-1-(4-methylsulfonylphenyl)-5-[4-(2-oxopyrrolidin-1yl)phenyl]imidazole 372107-48-7P, 3-[4-(2,5-Dioxopyrrolidin-1yl)phenyl]-4-(4-methylsulfonylphenyl)-5H-furan-2-one 372107-49-8P 4-(4-Methylsulfonylphenyl)-3-[4-(2-oxo-3-pyrrolin-1-yl)phenyl]-5H-furan-2-one 372107-52-3P, 3-[3-Chloro-4-(1-pyrrolidinyl)phenyl]-4-(4methylsulfonylphenyl)-5H-furan-2-one 372107-54-5P, 4-[5-[4-(2-0xo-3-pyrrolin-1-yl)phenyl]-3-trifluoromethyl-1H-pyrazol-1-

CN

yl]benzenesulfonamide 372107-55-6P, 4-[5-[4-(1-Pyrrolidinyl)phenyl]-3-trifluoromethyl-1H-pyrazol-1-yl]benzenesulfonamide RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (drug candidate; preparation of imidazole sulfones and analogs as cyclooxygenase 2 inhibitors and antiinflammatories)
RN 372107-27-2 CAPLUS

1H-Imidazole, 1-[4-(methylsulfonyl)phenyl]-5-[4-(1-pyrrolidinyl)phenyl]-(9CI) (CA INDEX NAME)

RN 372107-28-3 CAPLUS
CN 3-Pyrrolidinol, 1-[4-[4-chloro-1-[4-(methylsulfonyl)phenyl]-1H-imidazol-5-yl]phenyl]- (9CI) (CA INDEX NAME)

RN 372107-29-4 CAPLUS
CN 1H-Imidazole, 4-chloro-5-[4-(2-methyl-1-pyrrolidinyl)phenyl]-1-[4-(methylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)

RN 372107-31-8 CAPLUS

Benzenesulfonamide, 4-[4-chloro-5-[4-(1-pyrrolidinyl)phenyl]-1H-imidazol-1-CN yl] - (9CI) (CA INDEX NAME)

RN

372107-33-0 CAPLUS
1H-Imidazole, 4-chloro-5-[3-chloro-4-(1-pyrrolidinyl)phenyl]-1-[4-CN(methylsulfonyl)phenyl] - (9CI) (CA INDEX NAME)

RN 372107-35-2 CAPLUS

CN 2,5-Pyrrolidinedione, 1-[4-[4-chloro-1-[4-(methylsulfonyl)phenyl]-1H-imidazol-5-yl]phenyl]- (9CI) (CA INDEX NAME)

RN 372107-37-4 CAPLUS

CN 2H-Pyrrol-2-one, 1-[4-[4-chloro-1-[4-(methylsulfonyl)phenyl]-1H-imidazol-5-yl]phenyl]-1,5-dihydro- (9CI) (CA INDEX NAME)

RN 372107-39-6 CAPLUS

CN 2-Oxazolidinone, 3-[4-[4-chloro-1-[4-(methylsulfonyl)phenyl]-1H-imidazol-5-yl]phenyl]- (9CI) (CA INDEX NAME)

RN 372107-43-2 CAPLUS

CN 2-Pyrrolidinone, 1-[4-[4-chloro-1-[4-(methylsulfonyl)phenyl]-1H-imidazol-5-yl]phenyl]- (9CI) (CA·INDEX NAME)

RN 372107-48-7 CAPLUS

CN 2,5-Pyrrolidinedione, 1-[4-[2,5-dihydro-4-[4-(methylsulfonyl)phenyl]-2-oxo-3-furanyl]phenyl]- (9CI) (CA INDEX NAME)

RN 372107-49-8 CAPLUS

Patel

CN 2H-Pyrrol-2-one, 1-[4-[2,5-dihydro-4-[4-(methylsulfonyl)phenyl]-2-oxo-3-furanyl]phenyl]-1,5-dihydro- (9CI) (CA INDEX NAME)

RN 372107-52-3 CAPLUS

CN 2(5H)-Furanone, 3-[3-chloro-4-(1-pyrrolidinyl)phenyl]-4-[4-(methylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)

RN 372107-54-5 CAPLUS

CN Benzenesulfonamide, 4-[5-[4-(2,5-dihydro-2-oxo-1H-pyrrol-1-yl)phenyl]-3-(trifluoromethyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

RN 372107-55-6 CAPLUS CN

Benzenesulfonamide, 4-[5-[4-(1-pyrrolidinyl)phenyl]-3-(trifluoromethyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

GΙ

Patel

The invention relates to novel heterocyclic compds. of formula I, and to AB their salts, solvates, and prodrugs [wherein: A = 5-membered unsatd. or partially unsatd. ring with 1-3 optional heteroatoms (N/O/S), optional substituent(s) R2, and adjacent aryl groups; R1 = C1-8 (halo)alkyl, NR3R4; R2 = C1-4 (halo) alkyl, halo, oxo, cyano, NO2, CHO, COCH3, CO2R3; R3 = H, C1-8 alkyl, aryl, arylalkyl; R4 = H, C1-8 alkyl, arylalkyl, COR5, CO2R5; R5 = C1-8 (halo)alkyl; all X's = CR6; or 1-3 X's = N and the remainder = CR6; R6 = H, halo, C1-3 alkyl or alkoxy; dashed bond = optional pi bond; Y1, Y4 = CR7R7 or CO; Y2 and Y3 = CR8 when doubly bonded, or CR8R8 when singly bonded; Y2 can be CO if Y1 is not; Y3 can be CO if Y4 is not; Y3 can be NR9, O, or S if Y4 is CO; R7 = H, Me, Et; R8 = H, Me, Et, OH, OMe, or halo; R9 = H or C1-4 alkyl; aryl = Ph or naphthyl optionally substituted by C1-8 (halo) alkyl, halo, cyano, NO2, OR10, alkyl-OR10, SR10, alkyl-SR10, NR10R11, NR10COR11, COR10, CO2R10; R10 = H, C1-8 alkyl, CH2Ph, R11 = C1-8 (halo)alkyl]. The compds. are selective inhibitors of cyclooxygenase 2 (COX-2), useful as anti-inflammatory agents. Nineteen examples and 8 reference examples are given. For instance, 1-(4-methylsulfonylphenyl)ethanone underwent α -bromination, cyclocondensation with 4-nitrophenylacetic acid (60%), and hydrogenation at nitro (95%) to give 3-(4-aminophenyl)-4-(4-methylsulfonylphenyl)-5Hfuran-2-one. This intermediate underwent cyclization with 1,4-dibromobutane at the amino group (27%) and adjacent ring chlorination (73%) to give title compound II. In tests for inhibition of COX-1 and COX-2 activity in human cell lines, II at 0.1 µM gave 93% inhibition of COX-2 but did not appreciably inhibit COX-1 (0%).

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L3 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
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AN 2001:816651 CAPLUS

DN 135:358158

Preparation of N-[4-(oxadiazol-2-yl)phenylsulfonyl]-amino acid derivatives having therapeutic or preventive efficacies against glomerular disorders

IN Shinosaki, Toshihiro; Ninomiya, Mitsuyoshi; Watanabe, Fumihiko

PA Shionogi & Co., Ltd., Japan

SO PCT Int. Appl., 53 pp. CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT | NO. | | | KIN | D | DATE | | | APPL | ICAT | ION : | NO. | | D. | ATE | |
|----|---------------|------|------------|-----|-----|----------|------|----------------|-----|------|------|-------|----------|-----|------|-------|-----|
| | | | - - | | | - | | - | | | | | | | _ | | |
| ΡI | WO 2001083464 | | | Al | | 20011108 | | WO 2001-JP3215 | | | | | 20010416 | | | | |
| | | ΑE, | AG, | AL, | AM, | ΑT, | ΑU, | ΑZ, | BA, | BB, | BG, | BR, | BY, | BZ, | CA, | CH, | CN, |
| | | co, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ, | EE, | ES, | FI, | GB, | GD, | GE, | GH, | GM, |
| | | HR, | HU, | ID, | IL, | IN, | IS, | JP, | KE, | KG, | KR, | KZ, | LC, | LK. | LR. | LS. | LT. |
| | | LU, | LV, | MA, | MD, | MG, | MK, | MN, | MW, | MX, | MZ, | NO, | NZ, | PL, | PT, | RO, | RU. |
| | | SD, | SE, | SG, | SI, | SK, | SL, | TJ, | TM, | TR, | TT, | TZ, | UA, | UG, | US, | UZ, | VN, |
| | | YU, | ZA, | ZW, | AM, | ΑZ, | BY, | KG, | KZ, | MD, | RU, | TJ, | TM | | • | - | • |
| | RW: | GH, | GM, | ΚE, | LS, | MW, | MZ, | SD, | SL, | SZ, | TZ, | UG, | ZW, | AT, | BE, | CH, | CY. |
| | | DE, | DK, | ES, | FI, | FR, | GB, | GR, | ΙE, | ΙT, | LU, | MC, | NL, | PT, | SE, | TR, | BF, |
| | | ВJ, | CF, | CG, | CI, | CM, | GA, | GN, | GW, | ML, | MR, | ΝE, | SN, | TD, | TG | | |
| | | | | | | | | | | JP 2 | 000- | 1202 | 35 | 1 | A 20 | 30004 | 121 |
| OS | MAPDAT ' | 135. | 2521 | - Ω | | | | | | | | | | | | | |

OS MARPAT 135:358158 IT 372106-16-6P (R)

372106-16-6P, (R)-2-[[[4-[3-(4-(Pyrrolidin-1-yl)phenyl)-1,2,4-oxadiazol-5-yl]phenyl]sulfonyl]amino]-2-benzylethanoic acid RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);

BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of [(oxadiazolyl)phenylsulfonyl]-amino acid derivs. as matrix
metalloproteinase inhibitors and therapeutic or preventive agents for
glomerular disorders)

RN 372106-16-6 CAPLUS

CN D-Phenylalanine, N-[{4-{3-[4-(1-pyrrolidinyl)phenyl}-1,2,4-oxadiazol-5-yl]phenyl]sulfonyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

$$\begin{array}{c|c} & \text{HO}_2C & \text{O} & \text{O} \\ & \text{Ph} & \text{S} & \text{O} \\ & \text{H} & \text{S} & \text{O} \\ & & \text{O} & \text{N} \end{array}$$

GΙ

$$\begin{array}{c|c}
N & O \\
R^{5} & R^{4} - SO_{2} - N \\
R^{3} & R^{3}
\end{array}$$

Pharmaceutical compns. for the treatment or prevention of glomerular AB disorders contain as the active ingredient compds. of the general formula [I; R1 = NHOH, OH, lower alkyloxy; R2, R3 = H, (un)substituted lower alkyl, aryl, aralkyl, heteroaryl, or heteroarylalkyl; R4 = (un)substituted arylene or heteroarylene; R5 = (un)substituted aryl, heteroaryl, or nonarom. heterocyclyl], prodrugs of the same, pharmaceutically acceptable salts of both, or solvates of them. These compds. I inhibit matrix metalloproteinase (MMP) and are safe and highly effective for the prevention or treatment of glomerular disorders, in particular glomerular nephritis and diabetic nephropathy. They are also useful for the treatment of osteoarthritis, aortic aneurysm, and diabetic retinopathy. Thus, N-sulfonylation of D-phenylalanine Me ester hydrochloride with 4-chlorosulfonylbenzoic acid in aqueous Na2CO3 at room temperature for 3 h gave N-(4-carboxyphenylsulfonyl)-L-phenylalanine Me ester which was converted into the acid chloride by treatment with oxalyl chloride in DMF at room temperature for 1 h and cyclocondensed with 4-fluorobenzamidoxime (preparation given)

in pyridine and diglyme at room temperature for 1 h and then at 110° for 3 h, followed by saponification with a mixture of 1 N aqueous NaOH and DMSO and acidification with aqueous 2 N HCl to give N-[4-[3-(4-fluorophenyl)-1,2,4-oxadiazol-5-yl]phenylsulfonyl]-D-phenylalanine. N-[4-[3-(5-chlorothiophen-2-yl)-1,2,4-oxadiazol-5-yl]phenylsulfonyl]-L-valine showed IC50 of 0.0051, 0.056, and 0.025 μ M against MMP-2, 8, and 9, resp.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

I

L3 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

```
AN
     2001:816650 CAPLUS
DN
     135:357931
TI
     Preparation of oxadiazole derivatives as anticancer agents inhibiting
     Yoshioka, Takayuki; Maekawa, Ryuji; Watanabe, Fumihiko
IN
PA
     Shionogi & Co., Ltd., Japan
SO
     PCT Int. Appl., 57 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
     Japanese
FAN.CNT 1
     PATENT NO.
                         KIND
                                 DATE
                                             APPLICATION NO.
                                                                    DATE
                          ----
                                             ------
PΙ
     WO 2001083463
                          A1
                                 20011108
                                             WO 2001-JP3214
                                                                    20010416
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, BE, ES, FI, GB, GD, GE, GH, GM,
             HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT,
             LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
             SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
             YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                             JP 2000-120234
                                                                 A 20000421
     AU 2001046916
                          A5
                                 20011112
                                             AU 2001-46916
                                                                    20010416
                                             JP 2000-120234
                                                                 Α
                                                                    20000421
                                             WO 2001-JP3214
                                                                    20010416
     EP 1277744
                          Α1
                                 20030122
                                             EP 2001-919938
                                                                    20010416
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
                                             JP 2000-120234
                                                                 A 20000421
                                             WO 2001-JP3214
                                                                 W 20010416
     BR 2001010211
                                 20030603
                                             BR 2001-10211
                                                                    20010416
                                             JP 2000-120234
                                                                 A 20000421
                                             WO 2001-JP3214
                                                                 W 20010416
     ZA 2002008307
                          Α
                                 20031015
                                             ZA 2002-8307
                                                                    20021015
                                             JP 2000-120234
                                                                 A 20000421
     NO 2002005035
                                 20021219
                          Α
                                             NO 2002-5035
                                                                    20021018
                                             JP 2000-120234
                                                                 A 20000421
                                             WO 2001-JP3214
                                                                    20010416
     US 2003203940
                          Α1
                                 20031030
                                            US 2002-257917
                                                                    20021018
     US 6720343
                          B2
                                20040413
                                             JP 2000-120234
                                                                    20000421
                                             WO 2001-JP3214
                                                                    20010416
     US 2004122066
                          A1
                                20040624
                                             US 2003-730946
                                                                    20031210
                                             JP 2000-120234
                                                                    20000421
                                            WO 2001-JP3214
                                                                    20010416
                                             US 2002-257917
                                                                 A3 20021018
OS
     MARPAT 135:357931
IT
     372106-16-6P
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
     BIOL (Biological study); PREP (Preparation); USES (Uses)
        (preparation of oxadiazole derivs. as anticancer agents inhibiting MMP-2)
RN
     372106-16-6 CAPLUS
CN
     D-Phenylalanine, N-[[4-[3-[4-(1-pyrrolidinyl)phenyl]-1,2,4-oxadiazol-5-
     yl]phenyl]sulfonyl]- (9CI) (CA INDEX NAME)
```

Absolute stereochemistry.

GI

$$R^{5}$$
 $N = 0$
 $R^{4} - SO_{2} - N$
 R^{2}
 $CO - R^{1}$
 R^{3}

AB The title compds. I [R1 is hydroxyl or the like; R2 is optionally substituted lower alkyl or the like; R3 is hydrogen or the like; R4 is optionally substituted arylene or the like; and R5 is optionally substituted aryl or the like] are prepared The title compound II in vitro showed IC50 of 6 nM against MMP-2. Formulations are given.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:816648 CAPLUS

DN 135:344729

TI Preparation of N-thiazolylphenylsulfonylamino acid and N-oxazolylphenylsulfonylamino acid derivatives as macrophage metalloelastase inhibitors

IN Furue, Shingo; Watanabe, Fumihiko; Tamura, Yoshinori

PA Shionogi & Co., Ltd., Japan

SO PCT Int. Appl., 67 pp. CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2001083461 A1 20011108 WO 2001-JP3437 20010423

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,

Patel

HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

JP 2000-130041 A 20000428

JP 2000-293419 A 20000927

OS MARPAT 135:344729

IT 370597-61-8P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of N-thiazolylphenylsulfonylamino acid and N-

oxazolylphenylsulfonylamino acid derivs. as macrophage metalloelastase
inhibitors)

RN 370597-61-8 CAPLUS

CN D-Valine, N-[[4-[4-[4-(1-pyrrolidinyl)phenyl]-2-thiazolyl]phenyl]sulfonyl](9CI) (CA INDEX NAME)

Absolute stereochemistry.

GΙ

AB Title compds. [I; X = 0, N, S, CH; X1 = N, O; X2 = CH, S; dotted bond = single bond, double bond; R6 = (un)substituted aryl, benzofuranyl, benzothienyl; R2 = alkyl], optical isomers, prodrugs, and pharmaceutically

acceptable salts or solvates of title compds. are prepared as macrophage metalloelastase inhibitors. Thus, the title compound II was prepared and MMP-1, MMP-2, MMP-8, MMP-9, MMP-12, and MMP-13 inhibition tested.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L3 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2001:371567 CAPLUS
- DN 135:5612
- TI Preparation of new pyrazolo terpyridines as remedies for inflammation, autoimmune diseases
- IN Yamamoto, Hirofumi; Takahashi, Fumie; Kato, Takeshi; Nakamura, Katsuya; Manabe, Koji
- PA Fujisawa Pharmaceutical Co., Ltd., Japan
- SO Jpn. Kokai Tokkyo Koho, 64 pp. CODEN: JKXXAF
- DT Patent
- LA Japanese
- FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|----------------------------------|----------|
| PI | JP 2001139575 | A2 | 20010522 | JP 1999-323692
JP 1999-323692 | 19991115 |

- OS MARPAT 135:5612
- IT 340322-50-1P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of new pyrazolo terpyridines as remedies for inflammation autoimmune diseases)

- RN 340322-50-1 CAPLUS
- CN Benzenesulfonamide, 4-[2-[4-(1-azetidinyl)phenyl]pyrazolo[1,5-a]pyridin-3-yl]- (9CI) (CA INDEX NAME)

GΙ

$$R^{1}$$
 R^{2}
 N
 R^{3}

AB The pyrazolo terpyridine or that salt which is cyclooxygenase - 2 (COX-II) inhibitors, those production methods, the medicine composition, and the person or

II

the animal which contain those inflammation condition, u painfully, prevention of the autoimmune disease and / or the method of treating is offered. Below-mentioned general formula (I) [in the formula, the R1 and the R2, the resp. hydrogen, the hydrogen, the low-grade alkyl group and the halogen et cetera, mean, R3 such as low-grade alkyl group and the cyclo (low grade) alkyl group resp.] So the chemical compound which is displayed or that salt.

- L3 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2001:130219 CAPLUS
- DN 134:322321
- TI Electrostatics of Cell Membrane Recognition: Structure and Activity of Neutral and Cationic Rigid Push-Pull Rods in Isoelectric, Anionic, and Polarized Lipid Bilayer Membranes
- AU Sakai, Naomi; Gerard, David; Matile, Stefan
- CS Department of Organic Chemistry, University of Geneva, Geneva, CH-1211, Switz.
- SO Journal of the American Chemical Society (2001), 123(11), 2517-2524 CODEN: JACSAT; ISSN: 0002-7863
- PB American Chemical Society
- DT Journal
- LA English
- OS CASREACT 134:322321
- IT 335629-09-9P 335629-19-1P 335629-21-5P
 RL: BPR (Biological process); BSU (Biological study, unclassified); PEP
 (Physical, engineering or chemical process); PRP (Properties); SPN
 (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC
 (Process)

(electrostatics of cell membrane recognition: structure and activity of neutral and cationic rigid push-pull rods in isoelec., anionic, and polarized lipid bilayer membranes)

RN 335629-09-9 CAPLUS CN 1,4,7,10,13-Pentaoxa

PAGE 1-A

PAGE 2-A

$$\begin{array}{c|c} & & & & \\ & & & \\ & & \\ & & \\ & & \\ \end{array}$$

335629-19-1 CAPLUS 1,4,7,10,13-Pentaoxa-16-azacyclooctadecane, 16,16',16'',16''',16''',16''' ''-[[4-[(2-aminoethyl)sulfonyl]-4'''''-(methylthio)[1,1':4',1'':4'',1''':4''',1''''-octiphenyl]-

RN

CN

2',2''',2'''',3'',3'''''-hexayl]hexakis[oxy(1-oxo-2,1-ethanediyl)]]hexakis- (9CI) (CA INDEX NAME)

PAGE 1-A

RN 335629-21-5 CAPLUS
CN 1,4,7,10,13-Pentaoxa-16-azacyclooctadecane, 16,16',16'',16''',16'''',16''''
''-[[4-[(2-aminoethyl)thio]-4'''''-(methylsulfonyl)[1,1':4',1'':4''',1'''
:4''',1'''':4'''',1'''':4''''',1'''':4''''',1'''''-octiphenyl]-

2',2''',2'''',3'',3'''',3'''''-hexayl]hexakis[oxy(1-oxo-2,1-ethanediyl)]]hexakis- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

IT 335629-11-3P 335629-13-5P 335629-15-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
 (electrostatics of cell membrane recognition: structure and activity of

neutral and cationic rigid push-pull rods in isoelec., anionic, and
polarized lipid bilayer membranes)
RN 335629-11-3 CAPLUS
CN Carbamic acid, [2-[[4''''''-(methylsulfonyl)2',2''',2'''',3''',3''''-hexakis[2-oxo-2-(1,4,7,10,13-pentaoxa-16azacyclooctadec-16-yl)ethoxy][1,1':4',1'':4'',1''':4''',1'''':4''',1'''':4'''',1'''''
:4''''',1''''':4'''''',1'''''-octiphenyl]-4-yl]sulfonyl]ethyl]-,
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

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RN 335629-13-5 CAPLUS
CN Carbamic acid, [2-[[4'''''-(methylsulfonyl)-2',2''',2'''',3'''-hexakis[2-oxo-2-(1,4,7,10,13-pentaoxa-16-azacyclooctadec-16-yl)ethoxy][1,1':4',1'':4'',1''':4''',1''':4''',1''':4''',1''':4''',1''':4''',1'''':4''',1''''-octiphenyl]-4-yl]thio]ethyl]-,
```

1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

PAGE 1-B

$$CH_{2}$$

$$CH_{2}$$

$$CH_{2}$$

$$CH_{2}$$

$$CH_{2}$$

$$CH_{2}$$

PAGE 2-A

IT 335629-23-7P

RL: SPN (Synthetic preparation); PREP (Preparation) (electrostatics of cell membrane recognition: structure and activity of neutral and cationic rigid push-pull rods in isoelec., anionic, and polarized lipid bilayer membranes)

PAGE 2-A

PAGE 3-A

AΒ Design, synthesis, and structural and functional studies of rigid-rod ionophores of different axial electrostatic asymmetry are reported. The employed design strategy emphasized presence of (a) a rigid scaffold to minimize the conformational complexity, (b) a unimol. ion-conducting

pathway to minimize the suprastructural complexity and monitor the function, (c) an extended fluorophore to monitor structure, (d) variable axial rod dipole, and (e) variable terminal charges to create axial asymmetry. Studies in isoelec., anionic, and polarized bilayer membranes confirmed a general increase in activity of uncharged rigid push-pull rods in polarized bilayers. The similarly increased activity of cationic rigid push-pull rods with an electrostatic asymmetry comparable to that of α-helical bee toxin melittin (pos. charge near neg. axial dipole terminus) is shown by fluorescence-depth quenching expts. to originate from the stabilization of transmembrane rod orientation by the membrane potential. The reduced activity of rigid push-pull rods having an electrostatic asymmetry comparable to that in α -helical natural antibiotics (a pos. charge near the pos. axial dipole terminus) is shown by structural studies to originate from rod "ejection" by membrane potentials comparable to that found in mammalian plasma membranes. structural evidence for cell membrane recognition by asym. rods is unprecedented and of possible practical importance with regard to antibiotic resistance.

THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 54

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ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 17 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
1.3
AN
     2000:790480 CAPLUS
DN
     133:335232
TI
     Preparation of pyrazoles as antiinflammatory agents
     Lohray, Vidya Bhushan; Sunil, Kumar Singh; Akella, Venkateswarlu; Lohray,
     Braj Bhushan; Pamulapati, Ganapathi Reddy; Ramanujam, Rajagopalan;
     Parimal, Misra
PA
     Reddy's Research Foundation, India
SO
     PCT Int. Appl., 134 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                          KIND
                                  DATE
                                              APPLICATION NO.
                                                                        DATE
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                                  _____
                          A1
PΙ
     WO 2000066562
                                  20001109 WO 2000-IB556
                                                                       20000502
         W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
              SK, SL, TJ
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                               IN 1999-MA508
                                                                    A 19990503
os
     MARPAT 133:335232
IT
     304648-26-8P
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
     BIOL (Biological study); PREP (Preparation); USES (Uses)
        (preparation of pyrazoles as antiinflammatory agents)
RN
     304648-26-8 CAPLUS
CN
     Benzenesulfonamide, 4-[5-[1,1'-biphenyl]-4-yl-3-(trifluoromethyl)-1H-
     pyrazol-1-yl)-2-(hydroxymethyl)- (9CI) (CA INDEX NAME)
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GI

$$R^{1}$$
 R^{2}
 R^{2}
 R^{4}
 R^{5}
 R^{6}
 R^{6}

AB The title compds. [I; R1 = NH2, alkyl, alkylamino, etc.; R2 = CN, NO2, N3, etc.; R3 = H, halo, OH, etc.; R4-R6 = H, halo, OH, etc.; m = 0-2], useful for the treatment and/or prophylaxis of diseases of cyclooxygenase, more particularly COX-2, were prepared E.g., a multi-step synthesis of the pyrazole II which showed IC50 of 0.56 ± 0.03 (100 μM) against COX-2 vs. IC50 of 264 ± 0.5 (100 μM) against COX-1, was given.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:756693 CAPLUS

DN 133:309896

TI Preparation of sulfonamide derivatives having oxadiazole rings as matrix metalloprotease inhibitors

IN Watanabe, Fumihiko; Tamura, Yoshinori; Fujii, Yasuhiko

PA Shionogi & Co., Ltd., Japan

SO PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

Patel

| ΡI | WO 2000 | 063194 | A: | 20001026 | WO 2000-JP2404 | 20000413 | | | |
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| | | CU, CZ, | DE, DK | DM, DZ, EE, | ES, FI, GB, GD, GE, | GH, GM, HR, HU, | | | |
| | | ID, IL, | IN, IS, | JP, KE, KG, | KR, KZ, LC, LK, LR, | LS, LT, LU, LV, | | | |
| | | MA, MD, | MG, MK, | MN, MW, MX, | NO, NZ, PL, PT, RO, | RU, SD, SE, SG, | | | |
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| OS | MARPAT | 133:3098 | 96 | | | • | | | |

IT 301835-77-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of sulfonamide derivs. having oxadiazole rings as matrix metalloprotease inhibitors)

RN 301835-77-8 CAPLUS

CN D-Phenylalanine, N-[[4-[5-(4-cyclohexylphenyl)-1,2,4-oxadiazol-3-yl]phenyl]sulfonyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

GI

$$R^3$$
 N
 SO_2-N
 R^2
 $CO-Y$

The title compds. I [R1 and R2 are each independently hydrogen, optionally AB substituted lower alkyl, or the like; R3 is optionally substituted aryl, optionally substituted heteroaryl, or the like; X is CH:CH, O, or S; and Y is NHOH, hydroxyl, or lower alkyloxyl are prepared The title compound II in vitro showed IC50 of 0.067 μM against MMP-2. Formulations are given.

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 4 ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L3ANSWER 19 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2000:742084 CAPLUS
- DN 133:309836
- ΤĮ Preparation of 4,5-diaryl-3(2H)-furanones as cyclooxygenase-2 inhibitors
- Shin, Song Seok; Noh, Min-Soo; Byun, Young Joo; Choi, Jin Kyu; Kim, Jin Kwan; Lim, Kyung Min; Kim, Ji Young; Choi, Young Hoon; Ha, Jun-Yong; Lee, IN Ki-Wha; Moh, Joo Hyun; Jeong, Yeon Su; Chung, Shin; Joo, Yung Hyup; Lee, Chang Hoon; Kang, Seon Hwa; Park, Young-Ho; Yi, Jung Bum
- PA Pacific Corporation, S. Korea
- so PCT Int. Appl., 240 pp.

CODEN: PIXXD2

- DT Patent
- LA English

| FAN. | | | | | | | | | | | | | | | | | | |
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| PI | WO | 2000 | 0615 | 71 | | Al | | | | | | | | | | 2 | 0000 | 412 |
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| | EP | 1109 | | | CU | | | 2003 | | an | | | | | _ | | | |
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| NO 2001004986 | Α | 20011101 | NO 2001-4986 | - | 20011012 |
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KR 1999-39043 A 19990913 KR 2000-16866 A 20000331 KR 2000-17647 A 20000404 WO 2000-KR339 W 20000412

OS MARPAT 133:309836

IT 301690-35-7P 301691-71-4P 301693-02-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of 4,5-diaryl-3(2H)-furanones as cyclooxygenase-2 inhibitors)

RN 301690-35-7 CAPLUS

CN

3(2H)-Furanone, 4-(2-fluoro[1,1'-biphenyl]-4-yl)-2,2-dimethyl-5-[4-(methylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)

RN 301691-71-4 CAPLUS

CN 3(2H)-Furanone, 4-[1,1'-biphenyl]-4-yl-2,2-dimethyl-5-[4(methylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)

RN 301693-02-7 CAPLUS

CN Benzenesulfonamide, 4-{3-(2-fluoro[1,1'-biphenyl]-4-yl)-4,5-dihydro-5,5-dimethyl-4-oxo-2-furanyl]- (9CI) (CA INDEX NAME)

GI

$$X$$

$$AR$$

$$Q$$

$$R^{1}$$

$$R^{2}$$

$$I$$

The title compds. [I; X = halo, H, alkyl; Y = alkylsulfonyl, aminosulfonyl, alkylsulfinyl, etc.; Z = O, S; R1, R2 = alkyl; R1 and R2, taken together with the 2-position carbon atom of 3(2H)-furanone ring, form a 4-6 membered aliphatic or heterocyclic ring; AR = (un)substituted aryl of 5-10 atoms) which inhibit strongly and selectively COX-2 over COX-1 (data given), and are useful in treating inflammation, inflammation-associated disorders, and COX-2 mediated diseases, were prepared Thus, reacting 4-bromo-2,2-dimethyl-5-{4-(methylsulfonyl)phenyl}-3(2H)-furanone (preparation given) with 3-fluorobenzeneboronic acid in the presence of Pd(PPh3)4 and saturated aqueous NaHCO3 in PhMe and EtOH afforded I [X = H;

SO2Me; Z = O; R1, R2 = Me; AR = 3-FC6H4] which showed IC50 of 0.02 µg/mL against COX-2 vs. IC50 of 5 µg/mL against COX-1.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> log y
COST IN U.S. DOLLARS

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

TOTAL

Patel